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Attorney Docket No.: BA-00577

MAR 31 2006

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/608,169 Confirmation No.: 8244  
Applicant : Thomas J. McIntyre  
Filed : June 26, 2003  
TC/A.U. : 2872  
Examiner : L. Boutsikaris  
Title : FEEDBACK CONTROLLED PHOTONIC FREQUENCY  
SELECTION CIRUCIT  
  
Docket No. : BA-00577  
Customer No. : 22500

**REPLY BRIEF TRANSMITTAL**

Mail Stop **APPEAL BRIEF**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir,

Submitted herewith are:

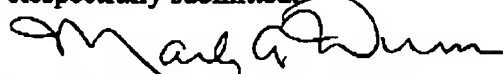
Reply Brief (3 pages)

Total number of pages 4 (including this cover sheet)

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I hereby certify that the above listed documents are being transmitted by facsimile to the Commissioner for Patents, United States patent and Trademark Office, Washington, D.C. 20231, at fax no. (571) 273 - 8300, this Friday, March 31, 2006.

Respectfully submitted,



Mark A. Wurn Reg. No. 31,682  
6600 Ladyslipper Lane  
Clifton, VA 20124  
Tel (703) 867-8334  
Fax (703) 367-3328

For Customer No. 22,500

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Application No.:	10/608,169	Confirmation No.:	8244
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**REPLY BRIEF UNDER 37 CFR §41.41**

Appellants request that the Appeal be maintained. The Examiner's Answer contained no new grounds for rejection and this Reply Brief does not contain any new amendment or evidence.

Application No. 10/608,169  
BA-00577 Reply Brief

# REJECTION UNDER 35 U.S.C. §102

For *prime facie* anticipation, either the allegedly the reference must teach every element of the claim. In particular, 35 U.S.C. 102(b) and (e) require that the allegedly anticipating reference describe the invention. Therefore, a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegall Bros. v. Unions Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The invention is a feedback controlled photonic frequency selection circuit for selecting the color of light transmitted to a fiber optic channel. The color is selected by changing the refractive index of a resonator by precisely controlling the resonator's temperature.

USP 5,159,601 to Huber does vary the refractive index of a resonator, but changes the grating spacing of a laser cavity by heating or piezoelectric means. It does not teach a color selection by changing of refractive index of a resonator. Huber is concerned about the drift of laser wavelength over time due to environmental conditions such as temperature. The invention of Huber is not designed for selection of varying wavelengths or frequency of light (color).

USP to Ueda provides a waveguide having a built-in heater. The heater provides a uniform temperature to an array of waveguides. The invention of Ueda does not select any color of frequent of light and not does change any index of refraction of a resonator.

USP to Eggleston et al. provide stabilization against ambient t temperature for fiber optical devices. It does not perform frequency selection nor use cause changes to the refractive index of resonator. Instead it attempts to prevent any frequency shift of light within the optical fiber.

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BA-00577 Reply Brief

### REJECTION UNDER 35 U.S.C. §103


To find the present invention *prime facie* obvious, at the very least, all of the elements of the claims rejected under this section must be disclosed in the references of Huber in view of USP 5,696,543 to Koizumi. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) **must teach or suggest all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP 2142 (emphasis provided).

Koizumi '543 is directed to a liquid ejecting recording head which uses thermal energy to record an image. There is no teaching or suggestion to apply this analogous art to the photonic frequency selection circuit of the present invention.

None of the reference, singularly or in combination provide for the controlled frequency selection in a photonic circuit. Therefore, the Applicant respectfully requests the Board to reverse the rejections of claims 1 – 13 and pass this application to Issue.

Respectfully Submitted,

Dated: March 31, 2006

By:   
Mark A. Wurm  
Reg. No. 31,682  
Tel.: (703) 867-8334  
Attorney for Appellant  
6600 Ladyslipper Lane  
Clifton, Virginia 20124